

# SIEMENS

PATENT  
Attorney Docket No. 2002P09019WOUS

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE IN RE  
APPLICATION OF:**

In re Application of:

Inventor:	K. Kock	)	Group Art Unit:	2617
		)		
Serial No.:	10/521,905	)	Examiner:	Miah, Liton
		)		
Filed:	01/20/2005	)	Confirmation No.:	7120
Title:	COMMUNICATIONS SYSTEM FOR AIRPORT SIGNALING DEVICES			

Mail Stop Appeal Brief - Patent  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

APPELLANTS' BRIEF UNDER 37 CFR 41.37

Sir:

This brief is in furtherance of the Notice of Appeal filed in this application on 24 June 2008.

1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in this Appeal is the assignee of the present application, Siemens Aktiengesellschaft.

2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

There is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims cancelled: 1 - 12.

Claims withdrawn but not cancelled: None.

Claims pending: 13-32.

Claims allowed: none.

Claims rejected: 13-32.

The claims on appeal are 13-32. A copy of the claims on appeal is attached hereto in the Claims Appendix. Appellants respectfully appeal the final rejection of claims 13-32.

4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

In response to the Final Office Action mailed 24 March 2008 the Examiner entered the Amendment filed under Rule 116 on 23 May 2008. In that Response claim 30 was amended to correct an error of an apparent nature. All outstanding art rejections are the same as presented in the Final Office Action.

## 5. SUMMARY OF THE CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

### 5A. BRIEF BACKGROUND AND OVERVIEW PROVIDING CONTEXT FOR THE SUMMARY OF THE CLAIMED SUBJECT MATTER

With reference by page and line number to the detailed description, the following summary describes one or more exemplary embodiments disclosed in the Specification and which are covered by specific claims, but it is to be understood that the claims are not so limited in scope.

Systems according to the invention relate airport signaling devices. The systems may comprise series or parallel circuits used for supplying electricity to the signaling devices and for communication between a control device, a central communication device and signaling devices. The power range of known systems such as these is limited due in part to serious interference factors. For example, the electrical characteristics of the cables used for communication fluctuate based on varying moisture content in the ground and aging. Interference is also caused, for example, by on-board electrical power supply systems, radar, radio links, placement of power and control cables in parallel orientation to one another, steel reinforcement, presence of fuel lines and build up of static charges. To overcome these problems the invention enables a communications system which avoids limitations resulting from the aforementioned interferences and improves communication in the airport ground area, without adding significantly to installation complexity.

As further described below with respect to the sole independent claim, embodiments of the invention effect communication between system components over a number of frequency bands in a limited frequency range, and the communication is effected via cabling used to feed power to the signaling apparatuses. Use of a number of frequency bands in the sense of frequency multiplexing makes the communications system particularly robust against high levels of pulsed interference without requiring complex, broadband channel equalization since each frequency band can be considered as a simple attenuator with fixed attenuation and a constant phase. The invention enables a robust communications system over power lines of the type use for airport signaling and lighting systems. Systems according to the invention are also capable of

providing increased data transmission rates. In certain embodiments the communication system incorporates time-division multiplexing. Use of a number of frequency bands effectively minimizes problems of crosstalk between individual communication channels. It has been found that an OFDM multicarrier method can be advantageously used for such communication on power lines in a frequency range between about 10 kHz and about 150 kHz. Contrary to expectations, this frequency range has been found to be particularly advantageous with respect to the frequency spectrum of interfering external systems in an airport area, allowing particularly fast, reliable communication with a high throughput rate. It has also been found that further advantages arise with use of up to ten different frequency bands and/or up to five different time slices for communication. The resulting insensitivity of the communications system for interference is thus further increased, allowing data transmission rates of more than 40 kbaud, and up to at least 1.5 Mbaud.

#### 5B. CONCISE EXPLANATION OF SUBJECT MATTER DEFINED IN INDEPENDENT CLAIM 13

Initially with reference to Figures 1 and 2, an embodiment of **independent claim 13** is directed to an airport lighting system in which a number of signalling apparatuses 3 (e.g., airport lights) are connected central communications apparatus 2 and to a monitoring apparatus 1. As described at page 6, lines 6-18 in accord with claim 13 there are illustrated

- (1) at least one central communications apparatus 2 (page 6, lines 6-18) and
- (2) a plurality of signaling apparatuses 1 (page 6, lines 6-18)
- (3) wherein a communication between the central communications apparatus 2 and the signaling apparatuses is performed via one or more circuits supplying the signal apparatuses with power, (see page 6, line 43 - page 7, line 8; see also page 7, lines 10-34 and Figure 3) and
- (4) wherein the communication between the central communications apparatus and the signaling apparatuses is performed in a frequency range using a number of frequency bands within the frequency range. See page 10, line 7 through page 11.

6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL - 37 CFR 41.37(c)(1)(vi)

1. Whether claims 13, 14, 20 and 29-32 are unpatentable under 35 U.S.C. Section 102 as being anticipated by Karna (5,291,299).
2. Whether claims 15, 16, 21 and 23-25 are unpatentable under 35 U.S.C. Section 103 over Karna.
3. Whether claims 17-19 and 22 are unpatentable over Karna in view of Ward (6,282,417).
4. Whether claims 26-28 are unpatentable over Karna in view of Norman (2003/0160707).

7. ARGUMENT 37 CFR 41.37(c)(1)(vii)

Overview of Argument

All of the claims have been rejected in whole or part based on the Karna reference. The rejections are a failed effort to create the claimed subject matter, in part because the rejections fail to identify every term in independent claim 13 and the claims which depend therefrom.

The claimed invention differs markedly over the prior art. During this prosecution, independent claim 13 was amended to more clearly define subject matter not present in any combination of the prior art. The Karna reference has no disclosure of communication between a central communications apparatus and a signaling apparatus using a number of frequency bands. None of the prior art compensates for this deficiency. Yet the Examiner continues to reject the independent claim over Karna alone. In the Advisory Action mailed 19 June 2008 the Examiner reiterates a confusing and incorrect equivalence. In essence the record states that disclosure of a specific clock signal frequency or other clock pulse frequencies somehow gives the Examiner license to equate clock pulse signals with communication using multiple frequency bands, e.g., as per Orthogonal Frequency Division Multiplexing (OFDM). Given this error, the rejection further mischaracterizes the Karna disclosure (which alludes to choosing among different individual clock pulse frequencies) as disclosing a use by Karna of a number of frequency bands. Further, the advisory action incorrectly argues that Appellants have made admissions against

interest with regard to subject matter for which the Examiner has taken Official Notice. To the contrary, Appellants have been attempting to point out to the Examiner that even with such Official Notice the Examiner does not have a basis for rejecting the claims. The claimed invention is not "OFDM" or discovery of certain frequency ranges for communication. Rather, Appellants claim combinations for which some individual pieces, e.g. OFDM, are known in the prior art. It is only the Appellants who provide non-obvious solutions according to which one may design communications systems for signalling apparatuses in an airport environment.

Also, as indicated above, use of certain claimed features provided unexpected improvements in immunity from interference, e.g., in a frequency range between about 10 kHz and about 150 kHz. There is no basis to contend that one skilled in the art would use OFDM or any other frequency band communications techniques over, for example, power lines in an airport environment.

#### 7A. APPELLANTS TRAVERSE ALL REJECTIONS BASED ON THE KARNA REFERENCE.

#### 7B. PATENTABILITY OF EACH CLAIM IS TO BE SEPARATELY CONSIDERED

Appellant urges that patentability of each claim should be separately considered. All of the claims are separately argued. General argument, based on deficiencies in the rejection of the independent claim demonstrates patentability of all dependent claims. However, none of the rejected claims stand or fall together because each dependent claim further defines a unique combination that patentably distinguishes over the art of record. For this reason, the Board is requested to consider each argument presented with regard to each dependent claim. Argument demonstrating patentability of each dependent claim is presented under subheadings identifying each claim by number.

BRIEF DISCUSSION OF THE KARNA REFERENCE AND GENERAL BASIS TO  
OVERTURN ALL REJECTIONS UNDER SECTION 102

As described in the Abstract, the Karna reference relates to a power supply and control unit for a light system, e.g., an airport approach light system. Figure 1 of Karna is a block diagram of a light system wherein block 2 generates clock pulses at a desired frequency. See col. 2, lines 34-39. As noted at subsequent lines 44ff, a control signal controls a power stage 4 to provide a supply voltage to lighting units 1 and the frequency of the clock pulses can be synchronized with the line frequency of the supply voltage. If the power stage uses GTO thyristors, or power transistors, other clock frequencies can be used. See col. 6, lines 53-57. None of the foregoing has anything to do with Appellant's claimed subject matter. Yet the Examiner incorrectly applies irrelevant information to find anticipation. As described below, the Karna reference lacks disclosure of all features recited in each of the claims rejected under Section 102. In order to sustain the rejections under Section 102 it is necessary to clearly identify every claimed feature in the reference relied upon. The rejection attempts to address certain features recited in the claims by inferring a superficial presence of the features and ignoring inconsistencies which are readily apparent with anything but a most superficial and incomplete reading of the prior art.

7B(1) REJECTION OF INDEPENDENT CLAIM 13 UNDER SECTION 102 BASED ON THE  
KARNA REFERENCE IS IN ERROR.

Application of the Karna reference under Section 102 results in deficiencies that render the rejection of claim 13 incorrect. In addition to providing at least one central communications apparatus, the communications system of claim 13 includes, among other features:

a plurality of signaling apparatuses, ...

wherein the communication between the central communications apparatus and the signaling apparatuses is performed in a frequency range using a number of frequency bands within the frequency range.

The above excerpt from claim 13 demonstrates subject matter not found in the Karna reference. In response to this argument the Examiner cites Karna at col. 2, lines 35-50. Appellants have already discussed the cited text (see above) to show that the foregoing has nothing to do with the above-recited claimed subject matter. It is not understood how an Examiner can ignore these technical differences and make a rejection final by merely stating that the Examiner respectfully disagrees. There is no support for the Examiner's position.

It is readily apparent that, taken out of context, one can often read individual phrases and claim elements on prior art having no relation to the given context. In this instance, the Examiner has attempted to stretch the meaning of words in the disclosure of Karna (e.g., col. 2, lines 35-50) in an attempt to make final a rejection under Section 102. In fact, the reference (1) does not relate to the claimed invention; and (2) does not disclose every element and feature recited in the claims. The Examiner somehow finds the quoted subject matter

*"communication between the central communications apparatus and the signaling apparatuses is performed ... using a number of frequency bands..."*

as though it is suggested or disclosed in the prior art. Rather, the text relied upon in the Karna reference (col. 2, lines 35-50) does not at all disclose such use of multiple frequency bands. The cited passage references a clock pulse synchronized with the line [frequency] and suggests that if the power stage comprises gate-commutated components "it is also possible to use other clock pulse frequencies." Id.

Again, in the context of the disclosure presented in the Karna reference (i.e., "a light system by means of which lamps contained in lighting units 1 can be lit up and put out to obtain a progressive light front." Col. 2, lines 34-36), there is neither a suggestion of the above use of a number of frequency bands nor any motivation to use such. The cited text only indicates that, in lieu of synchronizing a clock pulse signal with a line frequency, "it is also possible to use other clock pulse frequencies." Col. 2, lines 55-56. Again, looking at the context of the disclosure it is clear that reference to "frequencies" could not mean performing

*"communication ... using a number of frequency bands..."*



since the Karna reference would only use a **single** clock frequency for any given communication. Further, the claim language expressly requires that

*"communication ... is performed ... using a number of frequency bands..."*

Thus the Examiner's interpretation is inconsistent with the disclosure of Karna and the language of claim 13 is inconsistent with the disclosure of Karna. Consequently, based on a plain and literal reading of the claim language it is error to read claim 13 on the Karna reference. It is only the applicant who teaches a communications system for signaling apparatuses at an airport which system provides such communication using a number of frequency bands.

The rejection has only pulled phrases out of context to contrive a reading which is not properly grounded in the prior art and which does not make sense in the context of the Karna reference. In summary the Examiner's effort to "find" claim language in the prior art only results in an inconsistent reading of the prior art. Reversal of the rejection is required.

7B(2) THE REJECTION OF DEPENDENT CLAIMS 14, 20 AND 29-32 UNDER SECTION 102 BASED ON THE KARNA REFERENCE ALONE IS ALSO IN ERROR.

Rejection of each of the dependent claims 14, 20 and 29-32 is in error for reasons presented above with regard to independent claim 13. Further, each of these claims defines distinct and non-obvious subject matter which further distinguishes over the Karna reference.

7B(2)i REJECTION OF DEPENDENT CLAIM 14 UNDER SECTION 102 BASED ON KARNA IS ALSO IN ERROR.

Claim 14, which depends from claim 13, requires, among other features, that the communication is controlled by a number of time slices. The Karna reference does not relate to communication with a number of frequency bands, and disclosure of "pulse generation" according to block 2 of Figure 1 is not the same. Therefore it is incorrect to read Appellant's claimed "communication" on clock pulses. The prior art lacks disclosure of a number of frequency bands within a frequency range, rendering it incorrect to equate Appellant's time slices with clock pulses. The rejection is patently wrong and must be reversed.

7B(2)ii REJECTION OF DEPENDENT CLAIM 20 UNDER SECTION 102 BASED ON  
KARNA IS ALSO IN ERROR.

The communications system of claim 20, which depends from claim 14 requires that at least five time slices are used. In the context of the claimed subject matter it is inconsistent and impossible to read the claim on the prior art.

7B(2)iii REJECTION OF DEPENDENT CLAIM 29 UNDER SECTION 102 BASED ON  
KARNA IS ALSO IN ERROR.

According to the communications system of claim 29, the decentralized communications apparatus is configured to measure the reception quality of communications signals. The Examiner's reliance on the citation of col. 4 lines 27-38 to anticipate this subject matter is perplexing and incomprehensible. The cited passage has nothing to do with what is claimed.

7B(2)iii REJECTION OF DEPENDENT CLAIM 30 UNDER SECTION 102 BASED ON  
KARNA IS ALSO IN ERROR.

According to the communications system of claim 30, the decentralized communications apparatus preprocesses communication signals. The Examiner's citation of col. 4 lines 2-12 to anticipate this subject matter is also perplexing and incomprehensible since nothing is disclosed therein in relation to preprocessing communication signals. The cited passage has nothing to do with what is claimed and reversal of the rejection is required.

7B(2)v REJECTION OF DEPENDENT CLAIM 31 UNDER SECTION 102 BASED ON  
KARNA IS ALSO IN ERROR.

The communications system of claim 31 includes decentralized communication apparatuses forming an adaptive system. The examiner apparently cites col. 4, lines 43-50 merely because it uses the word "adapted" and completely disregards the context of the citation as well as the meaning of the claim. The cited passage has nothing to do with what is claimed and reversal of the rejection is required.

7B(2)vi REJECTION OF DEPENDENT CLAIM 32 UNDER SECTION 102 BASED ON KARNA IS ALSO IN ERROR.

In the communications system of claim 32 a communication path between at least two of the system components is determined using the measured reception quality. The Examiner's citation of col. 4 lines 21-27 to anticipate this subject matter is also perplexing and incomprehensible since nothing is disclosed therein in relation to what is claimed and reversal of the rejection is required.

7B(3) THE REJECTION OF DEPENDENT CLAIMS 15, 16, 21 and 23-25, WHICH EACH DEPEND FROM CLAIM 13, UNDER SECTION 103 BASED ON THE KARNA REFERENCE IS ALSO IN ERROR.

Each of the claims depending from claim 13 and rejected under Section 103 defines distinct and non-obvious subject matter and further distinguishes the invention over the prior art.

7B(3)i CLAIM 15 FURTHER DISTINGUISHES OVER THE ART OF RECORD

The communications system as claimed in patent claim 13 requires a frequency range chosen from the range between 10 kHz and 150 kHz. The Examiner ignores the context of the claimed subject matter (per claim 13) to contend it is notoriously well known to choose the recited frequency range. Appellant responds that in a most general sense, all usable frequency ranges can be considered well-known. The invention, however, applies use of a specific frequency range in a certain defined context, e.g., transmission of communication along power circuits, and there is nothing of record to suggest that such use might be well known. Indeed, it is in the context of Appellant's claimed combination that utility of the frequency range is recognized in this context. There is no evidence that one skilled in the art would do what is taught by the inventor. Reversal is required.

7B(3)ii CLAIM 16 FURTHER DISTINGUISHES OVER THE ART OF RECORD

According to claim 16, which depends from claim 14 the frequency range is chosen from the range between 10 kHz and 150 kHz. This subject matter is non-obvious for the same reasons noted above with regard to claim 15. Reversal is requested.

7B(3)iii CLAIM 21 FURTHER DISTINGUISHES OVER THE ART OF RECORD

According to claim 21 up to five time slices are used. The rejection cites col. 1, lines 37-43 which refers to control pulses corresponding to the frequency of clock pulses. Truly, when taken out of context one might see a similarity, but this is not the test for obviousness. The Examiner is ignoring the wording of claim 13 in order to contrive the rejection. Communication is in a frequency range using a number of frequency bands. This combination is absent from the prior art.

7B(3)iv CLAIM 23 FURTHER DISTINGUISHES OVER THE ART OF RECORD

According to claim 23 an OFDM method is used for performing the communication. Notwithstanding any "Official Notice" (Appellant does not refute that OFDM is known in the art) the rejection is in error because Karna does not at all deal with communication in a frequency range using a number of frequency bands. Thus there is no basis for contending obviousness.

7B(3)v CLAIM 24 FURTHER DISTINGUISHES OVER THE ART OF RECORD

According to claim 24 an OFDM method is used for performing the communication. Notwithstanding any "Official Notice" (Appellant does not refute that OFDM is known in the art) the rejection is in error because Karna does not at all deal with communication in a frequency range using a number of frequency bands. Thus there is no basis for contending obviousness.

7B(3)vi CLAIM 25 FURTHER DISTINGUISHES OVER THE ART OF RECORD

According to claim 25 an OFDM method is used for performing the communication. Notwithstanding any "Official Notice" (Appellant does not refute that OFDM is known in the art) the rejection is in error because Karna does not at all deal with communication in a frequency range using a number of frequency bands. Thus there is no basis for contending obviousness.

7B(4) THE REJECTION OF DEPENDENT CLAIMS 17-19 AND 22 WHICH EACH DEPEND FROM CLAIM 13, UNDER SECTION 103 BASED ON THE KARNA REFERENCE IN VIEW OF WARD (6,282,417) IS ALSO IN ERROR.

7B(4)i CLAIM 17 DISTINGUISHES OVER THE COMBINATION OF KARNA IN VIEW OF WARD.

The communications system of claim 17 requires use of up to ten frequency bands. As noted in the Abstract of Ward, the disclosed radio frequency selecting system relates to a system operable by a pilot for successive use of frequencies. This is not consistent with what is claimed and does not relate at all to the context of the claimed subject matter. There is no teaching to indicate one skilled in the art would find it obvious to make the claimed combination. The Examiner has not carried the requisite burden and the rejection should be reversed.

7B(4)ii CLAIM 18 DISTINGUISHES OVER THE COMBINATION OF KARNA IN VIEW OF WARD.

The communications system of claim 18 requires use of up to ten frequency bands. As noted in the Abstract of Ward, the disclosed radio frequency selecting system relates to a system operable by a pilot for successive use of frequencies. This is not consistent with what is claimed and does not relate at all to the context of the claimed subject matter. There is no teaching to indicate one skilled in the art would find it obvious to make the claimed combination. The Examiner has not carried the requisite burden and the rejection should be reversed.

7B(4)iii CLAIM 19 DISTINGUISHES OVER THE COMBINATION OF KARNA IN VIEW OF WARD.

The communications system of claim 19 requires use of up to ten frequency bands. As noted in the Abstract of Ward, the disclosed radio frequency selecting system relates to a system operable by a pilot for successive use of frequencies. This is not consistent with what is claimed and does not relate at all to the context of the claimed subject matter. There is no teaching to indicate one skilled in the art would find it obvious to make the claimed combination. The Examiner has not carried the requisite burden and the rejection should be reversed.

7B(5) THE REJECTION OF DEPENDENT CLAIMS 26-28 WHICH EACH DEPEND FROM CLAIM 13, UNDER SECTION 103 BASED ON THE KARNA REFERENCE IN VIEW OF NORMAN (2003/0160707) IS ALSO IN ERROR.

7B(5)i CLAIM 26 DISTINGUISHES OVER THE COMBINATION OF KARNA IN VIEW OF NORMAN.

In the communications system of claim 26 the central communications apparatus and the signaling apparatuses are connected via a series circuit. The invention is not merely formation of a series circuit. The rejection contends that Karna discloses all else (which is not true) and ignores the fact that Appellant claims a combination which is not found in the prior art. Merely finding a reference to a series circuit does not render the claim unpatentable.

7B(5)ii CLAIM 27 DISTINGUISHES OVER THE COMBINATION OF KARNA IN VIEW OF NORMAN.

In the communications system of claim 27 the central communications apparatus and the signaling apparatuses are connected via a series circuit. The invention is not merely formation of a series circuit. The rejection contends that Karna discloses all else (which is not true) and ignores the fact that Appellant claims a combination which is not found in the prior art. Merely finding a reference to a series circuit does not render the claim unpatentable.

7B(5)iii CLAIM 28 DISTINGUISHES OVER THE COMBINATION OF KARNA IN VIEW OF NORMAN.

In the communications system of claim 28 the central communications apparatus and the signaling apparatuses are connected via a series circuit. The invention is not merely formation of a series circuit. The rejection contends that Karna discloses all else (which is not true) and ignores the fact that Appellant claims a combination which is not found in the prior art. Merely finding a reference to a series circuit does not render the claim unpatentable.

7C. CONCLUSIONS

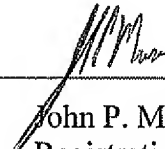
Argument has been presented to demonstrate that the rejections under Section 102 and Section 103 are deficient and that the dependent claims further distinguish over the prior art. The Examiner has argued rejections when claimed features are CLEARLY absent from the Karna reference and not suggested by the prior art. Accordingly, none of the rejections can be sustained. For all of the above argued reasons, all of the rejections should be withdrawn and the claims should be allowed.

8. APPENDICES

An appendix containing a copy of the claims involved in this appeal is provided herewith. No evidence appendix or related proceedings appendix is provided because no such evidence or related proceeding is applicable to this appeal.

Respectfully submitted,

Dated: 8/21/18

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## 9. APPENDIX OF CLAIMS ON APPEAL

13. A communications system for signaling apparatuses at an airport, comprising:  
    at least one central communications apparatus; and  
    a plurality of signaling apparatuses, wherein a communication between the central communications apparatus and the signaling apparatuses is performed via one or more circuits supplying the signal apparatuses with power, and wherein the communication between the central communications apparatus and the signaling apparatuses is performed in a frequency range using a number of frequency bands within the frequency range.
14. The communications system as claimed in patent claim 13, wherein the communication is controlled by a number of time slices.
15. The communications system as claimed in patent claim 13, wherein the frequency range is chosen from the range between 10 kHz and 150 kHz.
16. The communications system as claimed in patent claim 14, wherein the frequency range is chosen from the range between 10 kHz and 150 kHz.
17. The communications system as claimed in patent claim 13, wherein up to ten frequency bands are used.
18. The communications system as claimed in patent claim 14, wherein up to ten frequency bands are used.
19. The communications system as claimed in patent claim 15, wherein up to ten frequency bands are used.



20. The communications system as claimed in patent claim 14, wherein up to five time slices are used.

21. The communications system as claimed in patent claim 15, wherein up to five time slices are used.

22. The communications system as claimed in patent claim 17, wherein up to five time slices are used.

23. The communications system as claimed in patent claim 13, wherein an OFDM method is used for performing the communication.

24. The communications system as claimed in patent claim 14, wherein an OFDM method is used for performing the communication.

25. The communications system as claimed in patent claim 15, wherein an OFDM method is used for performing the communication.

26. The communications system as claimed in patent claim 13, wherein the central communications apparatus and the signaling apparatuses are connected via a series circuit.

27. The communications system as claimed in patent claim 14, wherein the central communications apparatus and the signaling apparatuses are connected via a series circuit.

28. The communications system as claimed in patent claim 13, wherein the central communications apparatus and the signaling apparatuses are connected via a parallel circuit.

29. The communications system as claimed in patent claim 13, wherein at least one decentralized communications apparatus is allocated to at least one signaling apparatus, and wherein the decentralized communications apparatus is configured to measure the reception quality of communications signals.

30. The communications system as claimed in patent claim 13, wherein at least one decentralized communications apparatus is allocated to at least one signaling apparatus, and wherein the decentralized communications apparatus preprocesses communication signals.

31. The communications system as claimed in patent claim 13, further comprising decentralized communication apparatuses forming an adaptive system.

32. The communications system as claimed in patent claims 29, wherein a communication path between at least two of the system components is determined using the measured reception quality.

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10. EVIDENCE APPENDIX - 37 CFR 41.37(c) (1) (ix)

None

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11. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c) (1) (x)

None